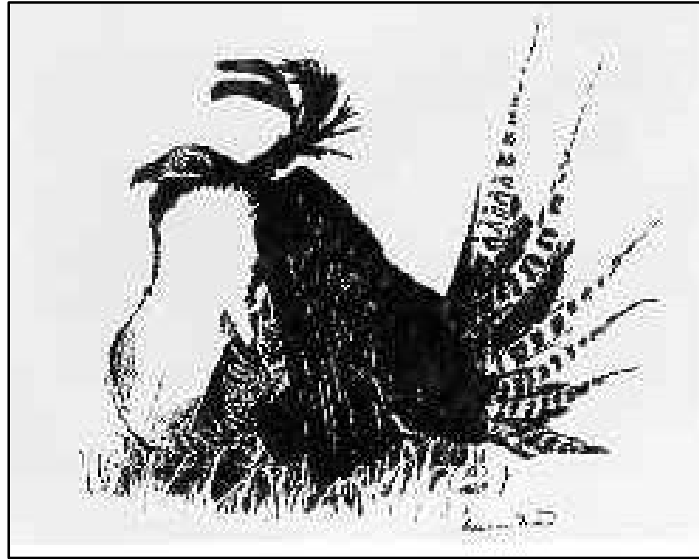


The Gunnison Sage-Grouse In San Juan County
October 2001 Quarterly Report



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Introduction

The San Juan County Gunnison Sage-Grouse Working Group (SWOG) was formed in 1996 to identify and implement community-based conservation strategies to reverse the decline of sage-grouse populations in the county. In the fall of 2000, SWOG finalized a Conservation Plan for sage-grouse in San Juan County. The plan consists of two parts. The first part is a Conservation Assessment describing SWOG's current understanding about the status of sage-grouse distributions, habitat conditions, and factors that may be affecting sage-grouse populations in the area. The second component of the plan is the Conservation Strategy, which identifies goals, objectives, conservation actions, implementation schedules and responsibilities, evaluation guidelines and monitoring requirements.

Objectives

To fulfill goals for monitoring and evaluation of sage-grouse populations and habitat in the area Utah State University, College of Natural Resources initiated a research program. According to the plan, USU is responsible for:

- Monitoring impacts of conservation strategies on sage-grouse habitat and population.
- Monitoring landscape-level habitat conditions, including monitoring of land use and vegetation changes in the conservation area.
- Provide information to the public, landowners, and others that identify sage-grouse habitat needs, conditions, and sage-grouse population levels.

Strategies

A graduate research assistant was hired by Utah State University, College of Natural Resources to implement strategies that would satisfy the objectives laid out in the plan. Research began in March of 2001 and is ongoing.

Monitoring sage-grouse habitat and population responses

To monitor habitat and sage-grouse populations, 6 sage-grouse (4 males, 2 females) were captured in March and April of 2001 on or near their strutting grounds. Birds were captured with handheld nets or handheld rocket-nets by spotlighting. One female suffered fatal injuries during the capture process. The birds were aged, sexed, and outfitted with radio-transmitters. Capture locations were recorded with a handheld GPS unit. Birds were released at the capture location immediately after processing.

Radio-collared birds were located three times a week until August 19, 2001 and once a month after that. At each location site, the location and time of day was recorded using a handheld GPS unit and the age and sex of additional uncollared birds were noted. At two out of three locations, microhabitat characteristics were sampled at the location site. Microhabitat measurements were taken within a week of locating the bird and were not

obtained when our presence would disturb study animals. Microhabitat measurements were taken at 50 points along two perpendicular 50 m transects run. Percent canopy cover, species frequency, and species composition was measured for each species present using the Daubenmire method. Plant height was measured using the Robel pole method.

Landscape-level land use and vegetation monitoring

In the Conservation Plan, SWOG references two vegetation/land use maps. One details the landscape composition of 1984 and one of 1993. The plan calls for the development of another vegetation/land use map, detailing more recent conditions. To fulfill this objective, a LandsatTM 30 m image was obtained from the Remote Sensing Laboratory at Utah State University. An unsupervised classification was run on the image, generating 31 cover classes. To aid in classification of the image, a total of 206 training sites were obtained for the 31 cover classes. At least one training site was obtained for all cover classes (range 1-19). Training sites were put into one of the 19 existing cover class categories based on the previous maps. Each training site location was recorded on a handheld GPS unit and percent cover of all vegetation, soil, litter, and rock was recorded according to guidelines put forth by the Southwest ReGap Project. Grouse sign, if present, was also noted.

Information distribution

Informational publications were produced to distribute information about Gunnison Sage-Grouse and SWOG's activities to the public. Utah State University and USU Extension Services produced a Gunnison Sage-Grouse Incidental Sighting Report booklet and a Gunnison Sage-Grouse in Utah brochure. The booklet provides space to record specific information about birds observed by the public. Booklets were distributed at the San Juan County Fair and to landowners encountered in the field. Booklets were also made available at the USU Extension Services office in Monticello, UT. The Gunnison Sage-Grouse in Utah brochure provides background information on Gunnison Sage-Grouse in San Juan County and outlines SWOG's activities and objectives. The brochure was also distributed at the San Juan County Fair and made available at the USU Extension Services Office in Monticello. The brochure was also made available to the public at the Utah Division of Wildlife Resources Office in Price, UT and the Interagency Information Center in Monticello, UT. A copy of this brochure has been included in this mailing.

The Gunnison Sage-Grouse Project distributed information and was on hand to answer questions at the San Juan County Fair held in August in Monticello, UT. As mentioned above, brochures and booklets were distributed at the booth. An informational video describing the difference between Gunnison and Greater Sage-Grouse played and the graduate research assistant was present to answer questions.

We also meet with the San Juan County Commissioners on August 28, 2001 to update them of the status of the conservation planning effort. In addition, we briefed them on the status of the the 2001 field work. The Commissioners responded very positively.

Conclusions

Overall, we feel the 2001 field season was a success. We feel that we have made progress on the specific items in the plan. Using what was learned this past year, we will attempt to capture more hens in the spring of 2002. By increasing the number of hens we monitor we will be able to get a better idea of Gunnison Sage Grouse habitat use patterns, nest site selection, nest success, brood-rearing habitat, and brood survival. Based on the one hen in the study, brood survival is of critical importance. The hen retained 3 chicks from an initial brood of 8 chicks. None of the birds we radio-collared birds died during the study. There was a known mortality of an uncollared bird; an adult bird was reported as being struck by a vehicle on Highway 666 just inside the Utah border with Colorado.

Evidence from this season demonstrates that sage-grouse in San Juan County depend on older Conservation Reserve Program (CRP) fields for roosting and as travel corridors. Further analysis of the data is needed before more definitive conclusions can be reached. This season's observation of sage-grouse males indicates that they seem to form bachelor groups while, in contrast, the hen in our study remained alone with her chicks until mid-August. After that, she joined up with other hens and, presumably, their chicks.

The training site data obtained this season will be used in the fall of 2001 to run a supervised classification on the 2000 image to create a new vegetation/land use map. This map will be used to evaluate changes in land use and vegetation across San Juan County. Next season, the accuracy of the new map will be checked with a new suite of training sites. Further land use or vegetation changes will be recorded as they are recognized as part of an ongoing effort to update existing maps.

In the spring of 2002, we will be making presentations to local schools in a further effort to bring Gunnison Sage-Grouse into the public eye. We also anticipate feedback on the brochure from SWOG members, which we will use to revise and improve the existing product.